

REMARKS

I. Introduction

Claims 17 to 33 and 35 to 37 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that the present application is in condition for immediate allowance, and reconsideration is respectfully requested.

II. Double Patenting

Regarding the provisional double patenting rejection, while this provisional rejection is not agreed with, to facilitate matters, Applicants are prepared to file a Terminal Disclaimer upon withdrawal of all other rejections and an indication that the present application is otherwise in condition for immediate allowance.

III. Objection to the Drawings

Regarding the objection to the drawings, while 37 C.F.R. § 1.83(a) requires the drawings to show every feature specified in the claims, it also provides that “conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, **should be**” -- but are **not required to be** -- “illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation.” The feature of a displacement sensor has been cancelled, and the feature of a circuit that activates a predefined search routine need not be illustrated since a detailed illustration thereof is not essential for a proper understanding of the claimed subject matter. The Examiner’s attention is also respectfully directed to 35 U.S.C. § 113, which states that “[t]he applicant shall furnish a drawing **where necessary for the understanding of the subject matter sought to be patented**” (emphasis added). Since a person of ordinary skill in the art would properly understand the feature of a circuit that activates a predefined search routine based on the description and the claims, no further illustration is required.

IV. Objections to Claims 17, 36, and 37

Claim 17 was objected to based on certain alleged informalities, and claims 36 was objected to as being in improper form. While the present objections

are not necessarily agreed with, to facilitate matters, claims 17, 36, and 37 have been amended herein without prejudice in self-explanatory manner.

Withdrawal of these objections are respectfully requested.

V. Rejection of Claims 17 to 25 and 35 Under 35 U.S.C. § 112, 1st Paragraph

Claims 17 to 25 and 35 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. It is respectfully submitted that these claims sufficiently comply with the written description requirement for at least the following reasons.

Regarding claim 17 and its dependent claims 18 to 25 and 35, while the rejection is not necessarily agreed with, to facilitate matters, the phrase “a display that depicts signal characteristics detected by a displacement sensor” has been deleted herein without prejudice. Accordingly, it is respectfully submitted that the present rejection as to claim 17 is moot, and withdrawal of this rejection is respectfully requested.

Accordingly, it is respectfully submitted that claims 18 to 25 and 35 sufficiently comply with the written description requirement for at least the above reasons.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

VI. Rejection of Claims 17 to 25 and 35 Under 35 U.S.C. § 112, 2nd Paragraph

Claims 17 to 25 and 35 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite. It is respectfully submitted that these claims are sufficiently definite for at least the following reasons.

Regarding claim 17 and its dependent claims 18 to 25 and 35, as mentioned above, the phrase “a display that depicts signal characteristics detected by a displacement sensor” has been deleted herein without prejudice. Accordingly, it is respectfully submitted that the present rejection as to claim 17 is moot, and withdrawal of this rejection is respectfully requested.

Accordingly, it is respectfully submitted that claims 18 to 25 and 35 are sufficiently definite for at least the above reasons.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

VII. Rejection of Claims 17 to 19 and 35 Under 35 U.S.C. § 103(a)

Claims 17 to 19 and 35 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 5,952,957 (“Szu”) and Radar Sensor for an Autonomous Antarctic Explorer, *Proc. SPIE , Mobile Robots XIII and Intelligent Transportation Systems*, volume 3525, pp. 117-124, January 1999 (“Foessel et al.”). It is respectfully submitted that the combination of Szu and Foessel et al. does not render these claims unpatentable for at least the following reasons.

Claim 17 has been amended herein without prejudice to recite that the at least one sensor is optimized on the basis of information obtained from the other sensors. Support for this amendment may be found, for example, on page 6, lines 13 to 17, of the Specification. By providing for a sensor that is optimized **on the basis of information obtained from the other sensors**, the device generates more accurate localization of the enclosed objects, since the sensor can generate signals which can be optimized, and adapted to the specific measurement situation, based on the measurement results of the other sensors. For example, as stated on page 6, lines 17 to 26,

a capacitive sensor recognizes a wooden single-panel wall by measuring the dielectric impedance. The radar sensor integrated into the device can then be operated so that air inclusions are measured, but are not displayed on the device's display. This can be achieved, for example, by the fact that the signal processing system downstream from the radar sensor averages out the signals of the air inclusions using ordinary averaging methods. In this fashion the radar sensor can be operated in optimized fashion.

Szu does not disclose, or even suggest, that at least one sensor is optimized on the basis of information obtained from the other sensors. Szu describes a system for generating and displaying an image of a target object including an infrared unit (103), a radar unit (102), a processor (101), and a display device (104). Szu makes no mention whatsoever of at least one sensor being optimized on the basis of information obtained from the other sensors. As such, it is

respectfully submitted that Szu does not disclose, or even suggest, all of the features included in claim 17.

Furthermore, Foessel et al. do not cure this deficiency. Foessel et al. describe an experiment conducted in 1998 using ground penetrating radar (GPR) to localize and identify antarctic meteorites. Nowhere, do Foessel et al. disclose, or even suggest, at least one sensor being optimized on the basis of information obtained from the other sensors.

Consequently, it is respectfully submitted that the combination of Szu and Foessel et al. does not render unpatentable claim 17, or claims 18, 19, and 35, which depend from claim 17.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

VIII. Rejection of Claims 17 to 21, 24, 25, and 35 Under 35 U.S.C. § 102(e)/103(a)

Claims 17 to 21, 24, 25, and 35 were rejected under 35 U.S.C. § 102(e), as anticipated by U.S. Patent Application Publication No. 2003/0193429 ("Campana et al.") or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Foessel et al. It is respectfully submitted that neither Campana et al. nor Foessel et al. render unpatentable the present claims for at least the following reasons.

Campana et al. does not disclose, or even suggest, that at least one sensor is optimized on the basis of information obtained from the other sensors. Campana et al. describe a sensor array (30) containing a row of GPR sensors (70), EMI coils (80), and a row of DLIR detectors (140), whereby the sensors are connected to the processor based system (130) and are configured to look down at the ground (60) in order to detect buried objects. Campana et al. make no mention whatsoever that at least one sensor is optimized on the basis of information obtained from the other sensors. As such, it is respectfully submitted that Campana et al. do not disclose, or even suggest, all of the features included in claim 17.

Furthermore, as mentioned above, Foessel et al. do not cure this deficiency, since Foessel et al. do not disclose, or even suggest, at least one sensor being optimized on the basis of information obtained from the other sensors.

Consequently, it is respectfully submitted that neither Campana et al.

nor Foessel et al. render unpatentable claim 17, or claims 18 to 21, 24, 25, and 35, which depend from claim 17.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

IX. Rejection of Claims 17, 18, 21 to 25, and 35 Under 35 U.S.C. § 103(a)

Claims 17, 18, 21 to 25, and 35 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 7,034,677 (“Steinthal et al.”) and Foessel et al. It is respectfully submitted that the combination of Steinthal et al. and Foessel et al. does not render unpatentable the present claims for at least the following reasons.

Steinthal et al. do not disclose, or even suggest, at least one sensor is optimized on the basis of information obtained from the other sensors. Steinthal et al. describe sensor array detectors capable of producing a response in the presence of physical stimuli. Steinthal et al. make no mention whatsoever of at least one sensor is optimized on the basis of information obtained from the other sensors. As such, it is respectfully submitted that Steinthal et al. do not disclose, or even suggest, all of the features included in claim 17.

As mentioned above, Foessel et al. do not cure this deficiency, since Foessel et al. do not disclose, or even suggest, at least one sensor being optimized on the basis of information obtained from the other sensors.

Consequently, it is respectfully submitted that the combination of Steinthal et al. and Foessel et al. does not render unpatentable claim 17, or claims 18, 21 to 25, and 35, which depend from claim 17.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

X. Conclusion

It is therefore respectfully submitted that the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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/Clifford A. Ulrich/
By: Clifford A. Ulrich (Reg. No. 42,194) for:
Gerard A. Messina (Reg. No. 35,952)

KENYON & KENYON LLP
One Broadway
New York, New York 10004
(212) 425-7200

CUSTOMER NO. 26646